

2103 Lecture Notes 4  
**Newton**  
Letter to Oldenburg, February 6, 1672

**Geometry and Mechanics**

- Review: Great synthesis = 3 laws + theory of gravity
- Compare with Descartes, rationalist approach

**Prism Experiments**

- Dispute about light: homogeneous vs. heterogeneous theories
  - Also wave vs. particle theories
- Experiments
  - Observations
  - *Experimentum crucis*
  - Findings: nature of light?
- Telescope
  - Refracting vs. Reflecting telescope
  - Solving chromatic aberrations

**Method**

- The method of analysis should always come before the method of composition
  - Example from mathematics
  - Prism experiments illustrate
- Deductive-Nomological Model
  - Modern account of traditional “scientific method”
- Lasting contribution
  - Method of science...
  - Rationalism vs. Empiricism